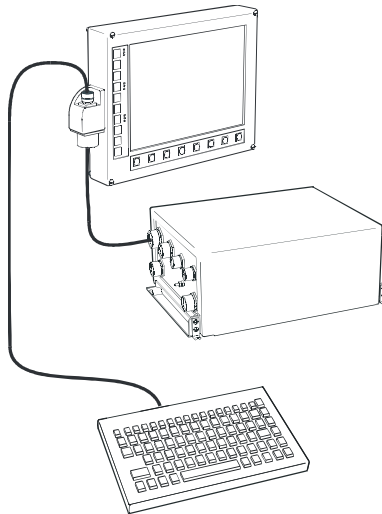**OPERATOR'S POCKET GUIDE**

FOR

COMPUTER SET, DIGITAL AN/UYK-128(V)

AN/UYK-128(V)1   (NSN 7010-01-475-5277)   (EIC:N/A)
AN/UYK-128(V)2   (NSN 7010-01-475-5275)   (EIC:N/A)

PART OF THE FBCB2 SYSTEM WITH EPLRS, PLGR AND SINCGARS ASIP

HEADQUARTERS, DEPARTMENT OF THE ARMY

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF ILLUSTRATIONS

LIST OF TABLES

LIST OF TABLES (Continued)

INTRODUCTION

This Pocket Guide describes the basic Initialization and Operations for the Force XXI Battle Command Brigade-and-Below (FBCB2) equipment and interface equipment. The FBCB2 equipment consists of the Computer Set, Digital AN/UYK-128(V). The interface equipment consists of the Enhanced Position Location Reporting System (EPLRS), Precision Lightweight GPS Receiver (PLGR), and Single Channel Ground and Airborne Radio system Advanced system Improvement Program (SINCGARS ASIP) and Internet Controller (INC). Refer to the appropriate Technical Manual (TM) for Warnings, Cautions and more detailed information on a specific piece of equipment.

1   PRE-OPS/POST-OPS

This section includes Pre-Ops/Post-Ops checks and services. Refer to Table 1-1 for Pre-Operational/Post-Operational checks performed prior to and after a mission. If any of the following conditions exist, the equipment is **not fully mission capable** and Unit Maintenance personnel should be notified.

Table 1-1. Pre-Operational/Post-Operational Checks

EQUIPMENT CHECK	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
FBCB2 System	Ensure all computer components, accessories, cables are present, secured and stowed properly.	Computer components (PU, DU and KU), accessories (PLGR, and radios) and cables missing, damaged, or inoperable that prevent proper operation.
AN/UYK-128(V) computer system	Check for loose hardware, damage to the exterior of the PU, DU, or KU.	Loose hardware that could damage equipment and/or personnel.

Table 1-1. Pre-Operational/Post-Operational Checks (Cont.)

EQUIPMENT CHECK	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
Display Unit (DU)	Check for cracks and/or scratches on the DU touchscreen.	**NOTE** The equipment is mission capable but degraded if: Touchscreen is cracked or has scratches that would prevent using touchscreen.
RAM-Ball	Check RAM-Ball assembly for tightness and make sure the DU is secured in the desired position.	RAM-Ball cannot be tightened.
Keyboard Unit (KU)	Check KU for inoperable, sticking keys or broken membrane seal.	Keyboard Unit has alpha, numeric, or Enter keys that do not function.
Processor Unit (PU)	Check battery charge indicator on either Battery Box or Battery Tray behind access door in PU.	**NOTE** The equipment is mission capable but degraded if: Backup power supply battery(s) fail to charge.
Processor Unit (PU)	Verify access door on PU is securely sealed prior to operation or wash down.	Access panel on PU cannot be sealed to prevent moisture from entering.

2 STARTUP/SHUTDOWN

This section consists of startup and shutdown procedures for the PLGR, EPLRS (if installed), INC, SINCGARS ASIP (if installed), and AN/UYK-128(V) computer. Login procedures for the FBCB2 software are also included.

2-1 EQUIPMENT STARTUP

Follow applicable Standard Operating Procedure (SOP) for platform power up, and then follow startup procedures in the order listed in this Pocket Guide. Startup the PLGR first, the EPLRS second (if installed), the INC third, and the SINCGARS fourth (if installed). Startup the AN/UYK-128(V) Computer last.

<div style="text-align:center">

CAUTION

</div>

Do not connect or disconnect the PLGR interface cable without first powering down the AN/UYK-128(V) computer and PLGR. Failure to comply will result in equipment damage.

2-1.1 PLGR Startup

Table 2-1. PLGR Startup

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	Press **ON BRT** (**1**) button for 2 seconds:	PLGR powers up and runs diagnostics. Display (sample) shows: **NO FAULTS FOUND Battery Status** **0000 used** **0000 left**

Table 2-1. PLGR Startup (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1 (Cont.)	**NOTE** It may take as long as 15 minutes for PLGR to acquire satellites. Ensure the PLGR has a good Line-Of-Sight (LOS) to the sky.	Display (sample) then shows: **CONT** **OLD** **N 31 08" 42.71"** **W 97 46" 1561"** **ELh+00196ft** ⬍P
2	Press down arrow (**5**) button.	Display (sample) shows: **2124:43Z** **TFOM 8** (or less) **25-12-00** **MON** **Speed too slow** **GS < 2 kph** ⬍P
3	Press down arrow (**5**) button three times or until FOM is displayed.	**NOTE** Need FOM of 4 or less for operation. Display (sample) shows: **CONT** **FOM 4** **N 31 08' 42.71"** **W 97 46' 15.61"** **ELh+00196ft** ⬍P

2-1.2   EPLRS Startup (If Equipped)

Table 2-2. EPLRS Startup

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	Turn EPLRS **POWER** switch on the Receiver-Transmitter, Radio to **ON + AUDIBLE**.	a. If the green **POWER** indicator is illuminated, proceed to Step 2. b. If the red **ALARM** indicator is illuminated, follow Unit SOP to load EPLRS COMSEC before proceeding to Step 2.
2	EPLRS performs self-test.	On the URO, after 5 seconds, **T** and **URO-OK** are displayed in the MODE and MSG descriptor fields.
3	Press repeatedly the User Readout (URO) **RCVD** button, until the EAST/BRG and NORTH/RNG fields of the URO display either:	a. If under **MSG** the following is displayed: **@C** or **@S.** This is a good fill. Proceed to Step 4. b. If under **MSG the** following is displayed: **@1**, **@3**, or **@4**. This indicates improper fill. Reload COMSEC per Unit SOP. c. If under **MSG** the following is displayed: **@0**. This indicates no fill. Reload COMSEC per Unit SOP.

Table 2-2. EPLRS Startup (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
4	EPLRS and URO, observe whether the **OUT-OF-NET** red indicator light(s) are lit. **NOTE** It may take several minutes for EPLRS to enter the Net.	a. If no red light(s) are lit, the EPLRS is correctly initialized. Proceed with Step 5 below. b. If a steady (or blinking) red light is displayed, refer to the EPLRS TM before proceeding.
5	Verify that your URO Radio Set ID (RSID) is the same as your FBCB2 setting (displayed under Admin…/Platform Settings/Misc. tab after AN/UYK-128(V) computer startup and login).	a. If correct RSID, proceed with Table 2-3, SINCGARS ASIP startup. b. If wrong RSID, zeroize the EPLRS. Turn off EPLRS and wait 30 seconds. Turn on EPLRS and enter "**- -**" in **MSG** field. Enter in your FBCB2 RSID and guard channel. Press **SEND** key. Confirm changes were accepted. Reload COMSEC, and then go back to Step 2 above.

2-1.3 INC Startup

Table 2-3. INC Startup

OPERATOR ACTION	INDICATION OR CONDITION
At the Vehicular Amplifier Adapter (VAA), set the **CB1 POWER** toggle switch to **ON** (up) position.	Green **DS1** power light is illuminated.

2-1.4 SINCGARS ASIP Startup (If Equipped)

Table 2-4. SINCGARS ASIP Startup

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	At the Receiver/ Transmitter (R/T), set the function switch to **SQ ON** (i.e., Squelch On) and verify settings.	**WAIT** first appears, then the following is displayed: PWR – LO, M, HI MODE – FH CHAN – 1 (per Unit SOP) CMSC – CT
2	Verify that COMSEC Crypto key is loaded. **NOTE** If COMSEC Crypto is not loaded, **FILL1** will be displayed and a steady tone will be heard over the radio.	a. If COMSEC Crypto is loaded, proceed with Step 3. b. If COMSEC Crypto is not loaded, follow proper Unit SOP to load Crypto before proceeding. (Refer to SINCGARS TM if necessary.)

2-5

Table 2-4. SINCGARS ASIP Startup (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
NOTE		
To enable FBCB2 to communicate, your SINCGARS ASIP must be set to the correct Net ID (for the AN/UYK-128(V) computer, after startup and login, Net ID (Data Net Frequency) is displayed under the **Admin…(F6)/Platform Settings/Misc.** tab).		
3	Verify that Net ID Frequency displayed is the same as the FBCB2 setting. Press **FREQ** button on the Receiver/ Transmitter (R/T) keypad to display SINCGARS Net ID frequency.	a. If correct frequency is displayed, go to Step 4. b. If wrong frequency is displayed, set FBCB2 Data Net Frequency into radio before proceeding. (Refer to SINCGARS TM if necessary.)
4	Verify PCKT mode. Press the **4** button on the R/T keypad, then press the **7** button repeatedly until **PCKT** is displayed.	PCKT Data Mode is set and verified when **PCKT** is displayed.

2-1.5   AN/UYK-128(V) Computer Startup/Login

Table 2-5 describes the Startup/Login procedure for the AN/UYK-128(V) computer. The PLGR, EPLRS (if equipped) INC, and SINCGARS ASIP (if equipped) must be fully operational before powering-up the AN/UYK-128(V) computer.

WARNING

Display may obstruct view of windshield and right side window. Maximize driver field-of-view prior to vehicle operation.

WARNING

Drivers viewing the Display Unit (DU) while operating vehicle may result in personnel hazards and/or equipment damage. Drivers should not view the DU while vehicle is in motion, unless otherwise dictated by Standard Operating Procedures (SOP) unique to that platform.

NOTE

Ensure KU is connected to the AN/UYK-128(V) computer prior to startup/login.

Table 2-5. AN/UYK-128(V) Computer Startup/Login

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	**NOTE** Ensure the vehicle primary power is on. Set circuit breaker/ switch on PU to ON.	The circuit breaker/ switch is pointed toward the centerline of the PU when set to the ON position.

Table 2-5. AN/UYK-128(V) Computer Startup/Login (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
2	Press the Display Unit (DU) **PWR** button for up to four (4) seconds and release after the **PWR** green Light Emitting Diode (LED) illuminates.	a. **PWR**, **DISP**, and **CPU** green LEDs illuminate. b. Startup continues automatically until DU displays the Session Manager Screen with Task Bar on the bottom (Refer to Figure 2–1).
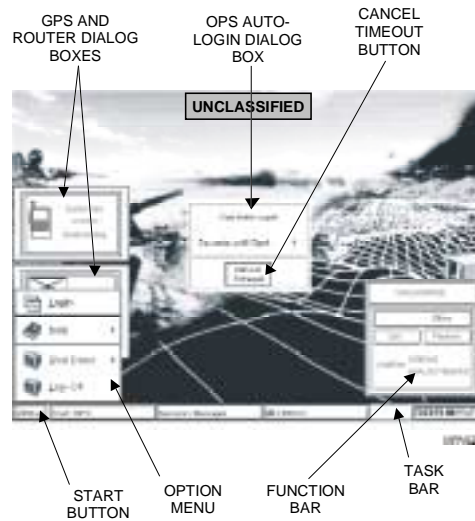
Figure 2–1. Session Manager Screen (During Login)

Table 2-5. AN/UYK-128(V) Computer Startup/Login (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
3	Select **Cancel Timeout** button on the **Ops Auto-Login** dialog box. **NOTE** The Count Down Timer has a 20 second time limit. If the timer is allowed to go to zero, the FBCB2 process to go online will begin automatically.	a. The **Ops Auto-Login** dialog box closes after the **Cancel Timeout** button is selected. b. The GPS initialization dialog box is displayed on the Session Manager screen and continuously updates during GPS startup. c. The Router initialization dialog box is displayed and will not update until Ops button is selected.
4	Check the color of both GPS and Router dialog boxes (when GPS and Comm cycle is complete) to determine your operational status. **NOTE** Red or yellow color-coding indicates a problem to be addressed before proceeding to Step 5.	Green color-coding indicates that the equipment is fully mission capable. Yellow color-coding indicates degraded operation. Red color-coding in the GPS and/or Router dialog box indicates that initialization has failed and that the GPS and/or Router are not responding.

Table 2-5. AN/UYK-128(V) Computer Startup/Login (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
5	Select the **Done** button on both the GPS and Router dialog boxes when initialization is complete.	The GPS and Router dialog boxes close.
6	Select the **Start** button.	The **Start** option menu is displayed.
7	Select the **Login** option.	The **Ops Login** dialog box is displayed.
8	Type in your Password.	Asterisks are displayed as the password is typed followed by a blinking cursor in the **Password** text box.
9	Select the **Continue** button.	The **Ops Login** dialog box closes. **NOTE** Perform clear logs and queues (Table 2-7) as required per SOP. **NOTE** Perform touchscreen calibration (Table 2-6) if required.

Table 2-5. AN/UYK-128(V) Computer Startup/Login (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
NOTE		

NOTE

Always verify that the correct Unit/Role ID is displayed before proceeding with Ops Login. Otherwise, you will not be able to receive your own incoming FBCB2 messages.

STEP	OPERATOR ACTION	INDICATION OR CONDITION
10	Check the Unit/Role in the Function Bar located in the lower right hand corner of the Session Manager screen.	If correct Unit/Role is displayed, proceed to Step 11. If wrong Unit/Role is displayed, perform configure role setup (refer to SUM) before proceeding to Step 11.
11	Select the **Ops** button in the Session Manager Function Bar.	The system goes online. The Ops Main Screen with the **FBCB2 Display Process** dialog box is displayed.

2-2 TOUCHSCREEN CALIBRATION

The Calibrate Touchscreen option is used to realign Display Unit touchscreen sensors with the FBCB2 software. This procedure is performed after AN/UYK-128(V) Startup/Login. (Refer to Table 2-6.)

Table 2-6. Touchscreen Calibration

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	Select the **Start** button.	The **Start** option menu is displayed.
2	Select the **Settings** option.	The **Settings** option menu is displayed.
3	Select the **Touch Screen…** option.	The calibration touchscreen is displayed with a target bull's eye at the lower left hand corner.
4	Select the center of the target bull's eye with the stylus.	The calibration touchscreen is displayed with a target bull's eye at the upper right hand corner.
5	Select the center of the target bull's eye with the stylus.	The calibration touchscreen is displayed with a target bull's eye at the lower right hand corner.
6	Select the center of the target bull's eye with the stylus.	The calibration screen closes. The **osc_touch_ calibrate.ksh** dialog box is displayed.
7	Type the letter "y".	The letter **y** is displayed at the enter prompt.
8	Select an enter button or key.	The **osc_touch_calibrate .ksh** dialog box closes.

2-3 CLEAR LOGS AND QUEUES

The Processor Unit will operate more efficiently (less chance of a software slowdown or need to reboot) if logs and queues are cleared regularly. This procedure is performed after the AN/UYK-128(V) Startup/Login. (Refer to Table 2-7.)

NOTE

When the disk drive is near its capacity, a highlighted exclamation point will be displayed on the "F5 Status…" button and the "General" tab.

Table 2-7. Clear Logs and Queues

STEP	OPERATOR ACTION	INDICATION OR CONDITION
From the Task Bar while Offline (but after Login):		
1	Select the **Start** button.	The **Start** button option menu is displayed.
2	Select the **FBCB2** option.	The FBCB2 option menu is displayed.
3	Select the **Clear Logs and Queues…** option.	The **Clear Logs and Queues** dialog box is displayed.
4	Under **Select Items to Clear**, select option(s) by selecting button next to corresponding option.	Option(s) button selected is shown with check mark.
5	Select the **Apply** button to clear selected option(s).	**Clear Logs and Queues Status** dialog box opens.

Table 2-7. Clear Logs and Queues (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
6	Select **Close** button when message **COMPLETED CLEAR LOGS & QUEUES OPERATION** is displayed.	The **Clear Logs and Queues Status** dialog box closes.
7	Select **Close** button in **Clear Logs and Queues** dialog box.	**Clear Logs and Queues** dialog box closes.

2-4 EQUIPMENT SHUTDOWN

2-4.1 AN/UYK-128(V) Computer Shutdown

Table 2-8 describes shutdown procedure for the AN/UYK-128(V) computer. The AN/UYK-128(V) computer must be shutdown first before the PLGR, EPLRS (if equipped) and SINCGARS ASIP (if equipped).

CAUTION

Do not shutdown power to the AN/UYK-128(V) computer without first following software shutdown procedures. Failure to comply may cause the loss of program data.

CAUTION

Leaving the Processor Unit (PU) circuit breaker/switch set to "ON" will enable the battery pack to continuously charge as long as there is 18-33 Volts Direct Current (VDC) power available. This could possibly result in a dead vehicle battery if left in this condition over an extended period of time.

CAUTION

The keyboard should be disconnected and properly stowed when not in use to prevent it from causing equipment damage.

Table 2-8. AN/UYK-128(V) Computer Shutdown

STEP	OPERATOR ACTION	INDICATION OR CONDITION
From the FBCB2 Display Process screen:		
1	Select the **F6 Admin…** button.	The **Admin** dialog box is displayed.

2-15

Table 2-8. AN/UYK-128(V) Computer Shutdown (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
2	Select the **Exit Ops…** button.	The **Exit Ops** confirmation dialog box is displayed.
3	Select the **Yes** button.	**Exit Ops** confirmation dialog box closes. The **Ops Auto-Login** dialog box opens with countdown timer started.
4	Select **Cancel Timeout** button.	The **Ops Auto-Login** dialog box closes.
5	Select the **Start** button.	The **Start** button option menu is displayed.
6	Select the **Shut Down…** option.	The Shut Down option menu is displayed.
7	Select the **Shutdown…** option.	Shut down confirmation dialog box is displayed.
8	Select the **Yes** button.	Screen displays: **Shutting Down the System Safe to power off when the screen message says "syncing file systems… done"** When **syncing file systems…done** message is displayed at bottom of the screen, proceed to next step.
9	Press DU **PWR** button for up to 4 seconds and release after DU **PWR** LED goes dark.	All display lights are dark (i.e., not illuminated).

Table 2-8. AN/UYK-128(V) Computer Shutdown (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
10	Set the circuit breaker/switch on the PU to the "OFF" position.	The circuit breaker/switch is pointed toward the outside edge of the PU.
11	Ensure system is properly secured (e.g., PU, DU and KU locked and secured).	

2-4.2 PLGR Shutdown

Table 2-9. PLGR Shutdown

OPERATOR ACTION	INDICATION OR CONDITION
Press the OFF (0) button for two seconds.	PLGR displays: Unit Turning OFF in ___ seconds ON: to cancel OFF: quick off

2-4.3 SINCGARS ASIP Shutdown (If Equipped)

Table 2-10. SINCGARS ASIP Shutdown

OPERATOR ACTION	INDICATION OR CONDITION
Place the function switch to **STBY** or **OFF** per SOP.	The SINCGARS display goes blank (i.e., dark).

2-4.4 INC Shutdown

Table 2-11. INC Shutdown

OPERATOR ACTION	INDICATION OR CONDITION
At the VAA, set the **CB1** POWER toggle switch to OFF (i.e., down position).	The **DS1** green POWER light goes off.

2-4.5 EPLRS Shutdown (If Equipped)

Table 2-12. EPLRS Shutdown

OPERATOR ACTION	INDICATION OR CONDITION
Turn **POWER** switch to the **OFF** position.	Green **POWER** indicator LED goes off.

3   BASIC OPERATIONS (OPS)

Basic Ops consists of those procedures that the operator uses most often.   These procedures are performed from the OPS screen (Figure 3–1).   Refer to the AN/UYK-128(V) Operator's Manual TM 11-7010-326-10 and/or embedded Software Users Manual for more detailed information.

The Basic Ops procedures are:

   a.   Select a Map.
   b.   Auto-Center.
   c.   Center on a Map.
   d.   Select Map Scale/Zoom.
   e.   Set Map Grid.
   f.   Turn Filters On/Off.
       1) SA Tab Group.
       2) Collapse/Expand Tab Group.
       3) Overlays Tab Group.
       4) Obstacle Overlays Tab Group.
   g.   Defaults and Addresses.
       1) Set Default Transmission Setting.
       2) Add Addresses Tab Group.
       3) MEDEVAC Settings.
   h.   Send Combat Message.
   i.   Mission Data Download/Upload.

CLASSIFICATION
STATUS BAR

COMMUNICATION
STATUS
INDICATORS

OPS
FUNCTION BAR

START
BUTTON

OPTION
MENUS

TASK
BAR
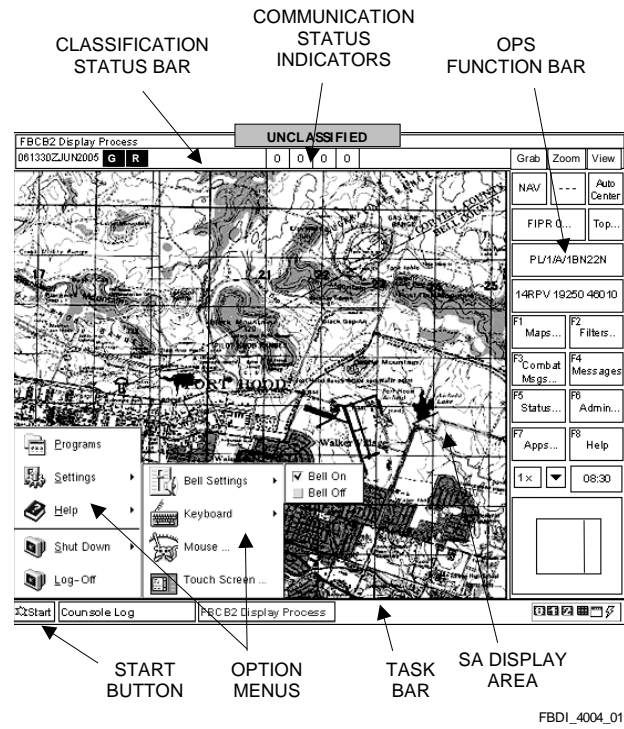
SA DISPLAY
AREA

FBDI_4004_01

Figure 3–1. Ops Screen

3-1 SELECT A MAP

Select a map allows the operator to retrieve a map from the database and then display that map. See Table 3-1 for the procedure.

Table 3-1. Select A Map

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the OPS Screen select **F1 Map…** button.	System displays the **Map Control** dialog box.
2	Select **Center** tab.	System displays **Center** tab group.
3	Select **Location** tab.	System displays **Location** tab group.
4	Select desired map name.	Map name background turns black; **Fill Location** shows map coordinates.
5	Select **OK** button.	System displays selected map and **Map Control** dialog box closes.

3-2 AUTO-CENTER

Auto-Center allows the operator to redisplay the map automatically with icon (himself) as the center. See Table 3-2 for the procedure.

Table 3-2. Auto-Center On A Map

OPERATOR ACTION	INDICATION OR CONDITION
From the OPS Screen select **Auto Center** button.	System centers own platform designation on map. **Auto Center** button will toggle and red circle with slash disappears.

3-3 CENTER ON A MAP

Center on a map allows the operator to adjust the map display to center on a location. See Table 3-3 for the procedure.

Table 3-3. **Center On A Map**

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the OPS Screen select **F1 Map…** button.	System displays the **Map Control** dialog box.
2	Select **Center** tab.	System displays **Center** tab group.
3	Select **Location** tab.	System displays **Location** tab group.
4	Select **Fill Loc:** button.	Tab group is removed and cursor is redisplayed as a crosshair.
5	Select location on the map.	Tab group is redisplayed with grid coordinate shown in the Fill Location text box.
6	Select **OK** button.	System centers on location indicated and **Map Control** dialog box closes.

3-4 SELECT MAP SCALE/ZOOM

Select map scale or zoom allows the operator to change the scale of a map or to zoom in or out on a displayed map. See Table 3-4 for the procedure.

Table 3-4. **Select Map Scale/Zoom**

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From OPS Screen select **F1 Map…** button.	System displays the **Map Control** dialog box.
2 **Scale**	Select **Background** tab.	System displays **Background** tab group.
3	Select **Scale** down arrow.	System displays **Scale** drop down option list.
4	Select desired map scale.	Option menu closes and selected map scale is displayed in **Scale** text box.
5 **Zoom**	Select **Zoom** down arrow.	System displays **Zoom** drop down option list.
6	Select desired zoom magnification.	Option menu closes and selected zoom level is displayed in **Zoom** text box.
7	Select **OK** button.	System causes map to change to new scale and/or zoom level and **Map Control** dialog box closes.

3-5 SET MAP GRID

Set map grid allows the operator to set the accuracy of the MGRS coordinates displayed. See Table 3-5 for the procedure.

Table 3-5. Set Map Grid

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the OPS Screen select **F1 Map…** button.	System displays the **Map Control** dialog box.
2	Select **Grid** tab.	System displays **Grid** tab group.
3	Select **Coordinate Type** down arrow.	System displays **Coordinate Type** option list.
4	Select **MGRS**.	Option list closes and **MGRS** is displayed in **Coordinate Type** text box.
5	Select **MGRS Accuracy** down arrow.	System displays **MGRS Accuracy** option list.
6	Select desired accuracy. **NOTE** 1 meter = 10 digits 10 meters = 8 digits 100 meters = 6 digits	Option list closes and accuracy is displayed in **MGRS Accuracy** text box.
7	Select **OK** button.	System causes map accuracy to change and **Map Control** dialog box closes.

3-6 TURN FILTERS ON/OFF

Filters function button is selected from the OPS Main Screen. Filters allow the operator to choose the following: unit icons and georeference objects that operator wishes to show on the SA map, display the choice of icons by unit hierarchy, display or hide overlays displayed in message folders, and display or hide obstacles received in obstacle messages. See Table 3-6 through Table 3-9 for the procedures.

3-6.1 SA TAB GROUP

The SA tab group allows the operator to choose from unit icons and georeference objects to be shown on the SA display. See Table 3-6 for the procedure.

NOTE

Friendly/Enemy categories have radio button options that allow user to make specific filter selections.

Table 3-6. Turn SA Filters On/Off

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the OPS Screen select **F2 Filters**… button.	System displays the **Filters** dialog box.
2	Select **SA** tab group.	**SA** tab group is displayed.
3 **Filters On**	Select **All On** button (or **Select** radio button for individual categories).	Each Radio Button has **All** radio button selected (or **Select** radio button for selectable categories).
4 **Filters Off**	Select **All Off** button (or **None** radio button for individual categories).	Each radio button has the **None** radio button selected (or **None** radio button for selected category).
5	Select **Close** button.	**Filters** dialog box closes.

3-6.2 Collapse/Expand Tab Group

The Collapse/Expand tab group allows the operator to choose the level of command displayed on the SA. See Table 3-7 for the procedure.

NOTE

Organizational icons will be located on the SA map at the center of mass of all its subordinate units whether or not the subordinate unit icons are displayed.

Table 3-7. **Collapse/Expand Tab Group**

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the OPS Screen select **F2 Filters**…	System displays the **Filters** dialog box.
2	Select the **Collapse/Expand** tab group.	**Collapse/Expand** tab group opens.
3 **Collapse Folder**	Select the – (minus) sign preceding the desired folder.	Subordinate units are hidden and folder closes.
4 **Expand Folder**	Select the + (plus) sign preceding the desired folder.	Subordinate units are displayed and folder opens.
5	Select **Close** button.	**Filters** dialog box closes.

3-6.3 Overlays Tab Group

The Overlays tab group allows the operator to display or hide overlays that have been saved in message folders. See Table 3-8 for the procedure.

NOTE

In the Overlays tab group, the **Select** radio button will only be active when an overlay has been saved in a message folder.

Table 3-8. Overlays Tab Group

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the OPS Screen select **F2 Filters**… button.	System displays the **Filters** dialog box.
2	Select **Overlays** tab group.	**Overlays** tab group opens.
3 **Display Labels**	Select Labels **All** button.	Radio Button has the **All** radio button selected (**All** radio button is black).
4 **Hide Labels**	Select Labels **None** button.	Radio button has **None** radio button selected. (**None** radio button is black).
5 **Display Overlays**	Select Overlays **All** or **Select** button.	**Overlays** Button has the **All** radio button selected or **Select** button has check mark by overlay selected.
6 **Hide Overlays**	Select Overlays **None** button.	Radio button has the **None** radio button selected. (**None** radio button is black).
7	Select **Close** button.	**Filters** dialog box closes.

3-6.4 Obstacle Overlays Tab Group

The Obstacle Overlays tab group allows the operator to display, hide or delete overlay information received in obstacle messages. See Table 3-9 for the procedure.

Table 3-9. Obstacle Overlays Tab Group

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the OPS Function Bar on the FBCB2 Display Process screen, select **F2 Filters**… button.	System displays the **Filters** dialog box.
2	Select the **Obstacle Overlays** tab group.	**Obstacle Overlays** tab group opens.
3 **Display Obstacles**	Select **All** button.	Radio Button has **All** radio button selected. (**All** radio button is black.)
4 **Hide Obstacles**	Select the **None** button.	Radio button has **None** radio button selected. (**None** radio button is black).
5 **Delete Obstacles**	Select one or more rows.	Selected rows are highlighted.
6	Select **Delete Selected** button.	Selected row(s) are deleted.
7	Select **Close** button.	**Filters** dialog box closes.

3-7 DEFAULTS AND ADDRESSES

3-7.1 Set Default Transmission Settings

Defaults and addresses settings allow the operator to set up the defaults and the addresses for messages to be sent. Table 3-10 will define this procedure for a sample message.

NOTE

Operator needs to perform the following task for each type of message.

Table 3-10. Set Default Transmission Settings

STEP	OPERATOR ACTION	INDICATION OR CONDITION
From the Ops Function Bar on the FBCB2 Display Process screen:		
1	Select the **F4 Messages…** button.	The **Messages** dialog box is displayed.
2	Select the **Create** tab group.	The **Create** tab group is displayed.
3	Select one of the **Msg Type** option buttons.	The selected option button is black and the related filenames are displayed.
4	Select a message filename.	The selected message filename is highlighted.
5	Select the **Set Default Message Addressing…** button.	The **Message Addressing** dialog box is displayed.
6	Select the **Message Settings** tab group.	The **Message Settings** tab group is displayed.

Table 3-10. Set Default Transmission Settings (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
7	Select a **Precedence** option button.	The selected radio button is highlighted.
8	Select one or more **Acknowledge** check boxes.	A check mark is displayed in the selected check boxes.
9		**NOTE** Ensure the Action Addresses and/or Info Addresses list has been setup before applying default settings (refer to Table 3-11, Step 6).
	Select the **Apply** button.	The selections are applied. **OK** and **Apply** buttons are grayed out (not selectable).
10	Select the **Close** button.	The **Message Addressing** dialog box closes.
11	Select the **Close** button.	The **Messages** dialog box closes.

3-7.2 Add Addresses Tab Group

The add addresses tab group is used to add/delete addresses to the message Action Addresses list and/or the Information Addresses list. See Table 3-11 for the procedure.

Table 3-11. Add Addresses Tab Group

STEP	OPERATOR ACTION	INDICATION OR CONDITION
From the Ops Function Bar on the FBCB2 Display Process screen:		
1	Select the **F4 Messages…** button.	The **Messages** dialog box is displayed.
2	Select the **Create** tab.	The **Create** tab group is displayed.
3	Select one of the **Msg Type** option buttons.	The selected option button is highlighted and the related filenames are displayed.
4	Select a message filename.	The selected message filename is highlighted.
5	Select the **Set Default Message Addressing…** button.	The **Message Addressing** dialog box is displayed.
6	Select the **Addresses** tab group.	The **Addresses** tab group is displayed.
7	Select the **Select From:** [down arrow] button.	The **Select From:** option list is displayed.
8	Select an option.	The selection is displayed in the **Select From:** text box.

Table 3-11. Add Addresses Tab Group (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
TO ADD AN ADDRESS FROM THE ACTION/INFO LIST:		
9	Select **Addresses** [down arrow] button.	**Addresses** option list is displayed.
10	Select the **Action Addresses** or **Info Addresses** option.	The selection is displayed in the corresponding **Addresses** text box.
11	Select address from the address list (left pane).	The selected address is highlighted.
12	Select the **Add** button.	The selected address is added to the **Addresses** list (right pane).
13	Select the **Apply** button.	**OK** and **Apply** buttons are grayed out (not selectable).
TO DELETE AN ADDRESS TO THE ACTION/INFO LIST:		
14	Select an address from action or info addresses list.	The selected address is highlighted.
15	Select the **Delete** button.	The selected address is removed.
16	Select the **Apply** button.	The selected address is removed from the **Addresses** list (right pane).
TO EXIT TRANSMISSION SETTINGS:		
17	Select the **Close** button.	The **Message Addressing** dialog box closes.
TO EXIT THE MESSAGES FUNCTION:		
18	Select the **Close** button.	The **Messages** dialog box closes.

3-7.3 MEDEVAC Settings

The Misc tab in the Platform Settings tab group provides access to the text boxes used to enter necessary MEDEVAC Call Sign and MEDEVAC Network Frequency. See Table 3-12 for MEDEVAC setting procedure.

Table 3-12. MEDEVAC Settings

STEP	OPERATOR ACTION	INDICATION OR CONDITION
From the Ops Function Bar on the FBCB2 Display Process screen:		
1	Select the **F6 Admin…** button.	The **Admin** dialog box is displayed.
2	Select the **Platform Settings** tab group.	The **Platform Settings** tab group is displayed.
3	Select the **Misc** tab.	The **Misc** tab group is displayed.
4	Select **MEDEVAC Requestor's Call Sign:** text box.	The **Requester's Call Sign** text box is highlighted and a blinking cursor is displayed.
5	Enter MEDEVAC Call Sign data.	The data is displayed in the **MEDEVAC Requestor's Call Sign:** text box.
6	Select **MEDEVAC Voice Net Frequency:** text box.	The **Voice Net Frequency:** text box is highlighted and a blinking cursor is displayed.
7	Enter the Frequency.	The data is displayed in the **MEDEVAC Voice Net Frequency**: text box.
8	Select the **OK** button.	The changes are applied and the **Admin** dialog box closes.

3-15

3-8 SEND COMBAT MESSAGE

Combat messages may be created and sent by using the touchscreen Combat Msgs… button on the display or the eight button bezel keypad on the 10.4" Display Unit. See Table 3-13 for the procedure.

Table 3-13. Typical Combat Messages

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	Complete Tables 3-10 and 3-11.	Defaults and addresses setup.
2	From OPS Screen select **F3 Combat Msgs…** button.	System displays **Combat Messages** Dialog Box.
3	Select **SALT** tab.	**SALT** tab group displayed.
4	Select **Equipment 1:** down arrow.	System displays option list.
5	Select desired equipment.	System displays selected equipment.
6	Select **+** or **-** to select quantity.	Quantity window displays quantity.
7	Repeat Steps 4 through 6 for **Equipment 2**: and **Equipment 3**: entries (if necessary).	The two additional equipment entry information is displayed.
8	Select **Activity** down arrow.	System displays option list.
9	Select desired activity.	System displays selected activity.

3-16

Table 3-13. Typical Combat Messages (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
	NOTE Perform Steps 10 & 11 to enter a grid location or Step 12 to enter a lased grid location, and then perform remaining steps.	
10	To enter a grid location select **Map** button.	**Combat Messages** dialog box closes and map is displayed.
11	Click on selected point on the map.	**Combat Messages** dialog box opens and Location information is displayed.
12	To enter a lased grid location select **LRF** button.	Last location lased is displayed.
13	Verify DTG info is displayed.	System displays DTG in DTG text box.
14	Select **Speed** down arrow.	System displays option list.
15	Select desired speed.	System displays selected speed.
16	Select **Course** down arrow.	System displays option list.
17	Select desired course.	System displays selected course.

Table 3-13. Typical Combat Messages (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
	NOTE Steps 18 through 20 are for SALT or CFF messages only. Select the hardest target first when sending a CFF and SALT message at the same time.	
18	Select Call For Fire (**CFF**) **Msg** button.	**CFF Msg** check box is check-marked and **Method of Engagement:** down arrow is active.
19	Select **Method of Engagement:** down arrow.	System displays option list.
20	Select desired engagement request type.	System displays selected engagement request.
21	Select **Save** button.	Following message displayed in display area: Message saved to file Spot _____.
22	Select **Send** button.	System displays message status in message display area.
23	Select **Close** button.	**Combat Messages** dialog box closes.

3-9 MISSION DATA DOWNLOAD/UPLOAD

This section consists of procedures for downloading mission data to the DTD/MDL and uploading the mission data to an AN/UYK-128(V) Computer. The DTD/MDL MUST be connected to the AN/UYK-128(V) Processor Unit or TOUGHBOOK prior to reboot or Startup. Connect the DTD/MDL to the AN/UYK-128(V) Display Unit after login with the Session Manager screen displayed. Refer to paragraph 5-6 for connecting the DTD/MDL to a computer.

WARNING

Do not disconnect or connect any cables without first properly powering down the system and turning off all power. Where applicable, always disconnect the ground cable last when disassembling and always connect the ground cable first when assembling. Failure to comply can cause injury to personnel or equipment damage.

NOTE

When connecting the DTD/MDL to the AN/UYK-128(V) DU, the AN/UYK-128(V) computer must be powered up and at the Session Manager screen.

3-9.1 Mission Data Download

Table 3-14 provides the procedure for downloading the mission data to the DTD/MDL from an AN-UYK-128(V) Computer or TOUGHBOOK Computer.

Table 3-14. Mission Data Download

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the Session Manager screen select the **Start** button.	The **Start** option menu is displayed.

3-19

Table 3-14. Mission Data Download (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
2	Select the **FBCB2** option.	The **FBCB2** option menu is displayed.
3	Select the **Mission Data Load** option.	The **Mission Data Load** option menu is displayed.
4	Select the **Create MDL** option.	The **Mission Data Create** dialog box is displayed.
5	Select a data file from the **Available Data Files:** pane.	The selected file name is highlighted.
6	Select a folder name from the **Current Missions:** pane.	The selected folder name is highlighted.
7	Select the **Add Data File** button.	The data file is copied to the **Current Missions:** pane.
8	Select the **Write Mission to MDL…** button.	The **Write Mission** dialog box is displayed.
9	Select the down arrow.	System displays the option list.
10	Select an option, **Portable Media** or **Local Drive**.	If **Portable Media** option is selected: the system displays the **Media Check** dialog box. If **Local Drive** option is selected: option list closes and the selected option is displayed in the text box.

Table 3-14. Mission Data Download (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
11	If Portable Media option was selected: select the **Yes** button.	The **Media Check** dialog box closes.
12	Select the **OK** button.	The **Write Mission** dialog box is displayed with successful status.
13	Select the **OK** button.	The **Write Mission** dialog box closes.

3-9.2   Mission Data Upload

Table 3-15 provides the procedure for loading the mission data to an AN/UYK-128(V) Computer or TOUGHBOOK Computer from the DTD/MDL.

Table 3-15. Mission Data Upload

STEP	OPERATOR ACTION	INDICATION OR CONDITION
1	From the Session Manager screen select the **Start** button.	The **Start** option menu is displayed.
2	Select the **FBCB2** option.	The **FBCB2** option menu is displayed.
3	Select the **Mission Data Load** option.	The **Mission Data Load** option menu is displayed.
4	Select the **Install MDL** option.	The **Mission Data Extractor/Installer** dialog box is displayed.
5	Select the **Media** down arrow.	System displays the **Media** option list.

Table 3-15. Mission Data Upload (Cont.)

STEP	OPERATOR ACTION	INDICATION OR CONDITION
6	Select an option.	Option list closes and the selected option is displayed in the **Media** text box.
7	Select a folder name from the **Missions on MDL:** pane.	The selected folder name is highlighted.
8	Select a folder name from the **Mission Extracted:** pane.	The selected folder name is highlighted.
9	Select the **Extract** button.	The system will copy the selected file from the **Missions on MDL:** pane to the **Mission Extracted:** pane. **Extract Successful!** dialog box is displayed.
10	Select the **OK** button.	The **Extract Successful!** dialog box closes.
11	Select the **Install** button.	The system will display the **Install?** confirmation dialog box.
12	Select the **Yes** button.	The **Install?** dialog box closes and the system displays the **Install Complete!** dialog box.
13	Select the **OK** button.	The **Install Complete**! dialog box closes.
14	Select the **Close** button.	The **Mission Data Extract/ Installer** dialog box closes.

4   HELP AND TUTORIAL

AN/UYK-128(V) contains an on-line help capability. The Help capability provides fast and responsive information. There are three levels of help available in FBCB2 software:

   a.   Balloon Help.

   b.   Context-Sensitive Help.

   c.   Software Users Manual.

4-1   BALLOON HELP

Balloon help is designed to answer the question, 'What is this?' The help text will pop-up on the screen when the cursor is on top of an object for at least 2 seconds.

4-2   CONTEXT-SENSITIVE HELP

Context-Sensitive help is designed to provide 'need to know' information for a specific function. The help dialog box will activate when the user selects the **Help** button located at the bottom of a dialog box.

4-3   SOFTWARE USERS MANUAL

The embedded Software Users Manual (SUM) is designed to provide detailed information on FBCB2 software operation. The SUM contents list may be accessed by first selecting the **Start** button on the Task Bar, then by selecting the **Help** option then **Software Users Manual** option.

4-4   HELP (F8) FUNCTION

   a.   Select the **Help** (**F8**) button to display version information.

   b.   On the Ops main screen select the **Help** button in a dialog box to help describe the function being performed.

c. SUM can only accessed from the task bar. Select **Start**, **Help**, then **and Software Users Manual**. From this the user can obtain the selected information by utilizing the **Contents**, **Index**, or **Acronyms** buttons located at the top of the Netscape window. To exit, select either of the two house icons at the top of the Netscape window.

1) Selecting the **Contents** button will give the user a contents listing. The user can scroll through the listing using the up and down arrows. By highlighting the selection and pressing the left mouse key the requested information is displayed.

2) Selecting the **Index** button will give the user a choice of letters. The user highlights a letter and presses the left mouse key. A contents listing is then shown for that letter. By highlighting the selection and pressing the left mouse key the requested information is displayed.

3) Selecting the **Acronyms** button will give the user a listing of the acronyms and their definitions used for the FBCB2 software operation. The user scrolls through the list using the up and down arrows.

4-5 EMBEDDED TUTORIAL

The embedded Tutorial provides tactical scenarios that require operators to perform specific tasks in much the same way as the real system. Simulations are "lock step" and use descriptive tags to guide the operator through each task, while providing the correct answers. For access to the embedded Tutorial, select the **Start** button on the Task Bar; next select **Help**, then the **Tutorial** option.

5 AN/UYK-128(V) COMPUTER SET DESCRIPTION

Figure 5–1 illustrates one of two AN/UYK-128(V) computer sets. The DUs, PUs, and KUs are interchangeable. The RHDDC is located inside the PU on the left for NSN 7021-01-475-0217/ NSN 7021-01-487-0579 (as shown in Figure 5-1 below), but is not interchangeable with the RHDDC, located on the right side of PU NSN 7021-01-3793/NSN 7021-01-487-0578.
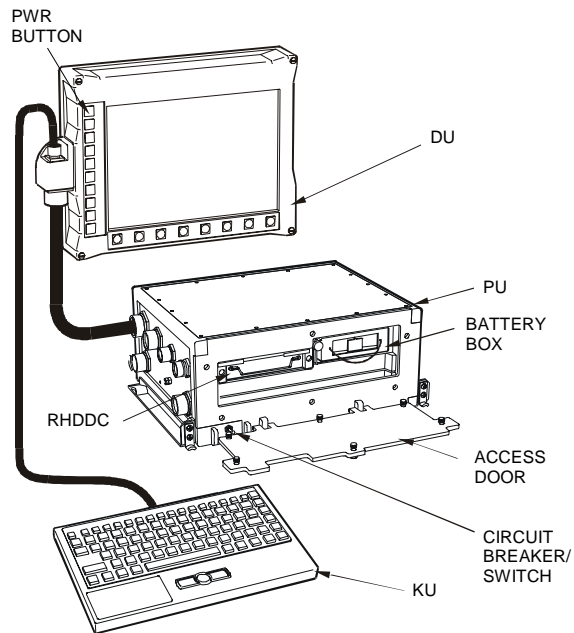

Figure 5–1. AN/UYK-128(V) with PU NSN 7021-01-475-0217/ NSN 7021-01-487-0579

5-1 POWER AND ILLUMINATION CONTROLS

Table 5-1 lists the power and illumination controls for the Processor Unit (PU) and the Display Unit (DU).

Table 5-1. Power and Illumination Controls

CONTROL	HARDWARE FUNCTION
PROCESSOR UNIT CONTROLS:	
Circuit Breaker/Switch	Ten-ampere circuit breaker/switch provides overload protection and enables/disables power.
DISPLAY UNIT CONTROLS:	
PWR button	Power up/power down the system.
BRT+ button	Increase display illumination incrementally.
LED+ button with **FCN** button	Increase the Light Emitting Diode (LED) illumination incrementally.
BRT- button	Decrease display illumination incrementally.
LED- button with **FCN** button	Decrease the LED illumination incrementally.
BLK OUT button	Black out the display and all LEDs.
LAMP button with **FCN** button	Lights all LEDs on DU for test.

5-2 DISPLAY UNIT (DU) LED DISPLAY INDICATIONS

Table 5-2 lists the Light Emitting Diode (LED) indicators located on the Display Unit (DU) for Power (PWR), Display (DISP), and Processor Unit (CPU) status.

Table 5-2. DU LED Indicators

CONTROL	HARDWARE FUNCTION
POWER (**PWR**) STATUS INDICATORS:	
Red	Loss of vehicle power – computer is running on internal battery. (Note: Display will operate at reduced brightness).
Blinking Red	Input power out of acceptable range.
Amber	Power supply output voltage out of acceptable range.
Green	Power "On" – no problems detected.
DISPLAY (**DISP**) STATUS INDICATORS	
Red	DU shutdown or failure.
Amber	Degraded operation.
Blinking Amber	Communication error – problem at DU.
Green	Display Unit OK.
PROCESSOR UNIT (**CPU**) STATUS INDICATORS:	
Red	PU shutdown or failure.
Blinking Red	Power On Self Test (POST) problem.
Amber	Degraded PU operation – Temp Warning.
Blinking Amber	Communication error – no message from PU.
Green	Processor Unit OK.

5-3 DISPLAY UNIT (DU) FUNCTION KEYS

Table 5-3 lists the software functions that can be performed from the 8-button hardware function keys located on the bezel of the two different DU types.

NOTE

For more detailed information on the use of the 8-button keypad on the DU bezel, refer to FBCB2 AN/UYK-128(V) Operator's Manual, TM 11-7010-326-10.

Table 5-3. Display Unit (DU) Function Keys

8-BUTTON BEZEL KEYPAD	SOFTWARE FUNCTION
ALT F1	Combat Mode
ALT F2	Combat Message
ALT F3	Message Tab
ALT F4	Previous Field
ALT F5	Next Field
ALT F6	Up List
ALT F7	Down List
ALT F8	Select

5-4   KEYBOARD UNIT (KU) FUNCTION KEYS

Table 5-4 lists the software functions that can be performed by using the function keys located on the KU.

NOTE

For more information on the KU function keys, refer to the FBCB2 AN/UYK-128(V) Operator's Manual, TM 11-7010-326-10.

Table 5-4. Keyboard Unit (KU) Function Keys

FUNCTION KEY	SOFTWARE FUNCTION	FUNCTION KEY	SOFTWARE FUNCTION
F1	F1 Maps	(Left) **Alt** + **F1**	Combat Mode
F2	F2 Filters	(Left) **Alt** + **F2**	Combat Message
F3	F3 Combat Msgs	(Left) **Alt** + **F3**	Message Tab
F4	F4 Messages	(Left) **Alt** + **F4**	Previous Field
F5	F5 Status	(Left) **Alt** + **F5**	Next Field
F6	F6 Admin	(Left) **Alt** + **F6**	Up List
F7	F7 Apps	(Left) **Alt** + **F7**	Down List
F8	F8 Help	(Left) **Alt** + **F8**	Select
F9	Not Used	(Left) **Alt** + **F9**	Not Used
F10	Not Used	(Left) **Alt** + **F10**	Not Used
F11	Not Used	(Left) **Alt** + **F11**	Not Used
F12	Not Used	(Left) **Alt** + **F12**	Not Used

5-5 INTERCONNECT DIAGRAM

Figure 5–2 displays the generic interconnect diagram. This generic configuration shows some of the standard interconnections. Refer to the applicable platform manual for interconnect details. W4 shown for platforms with intercom.
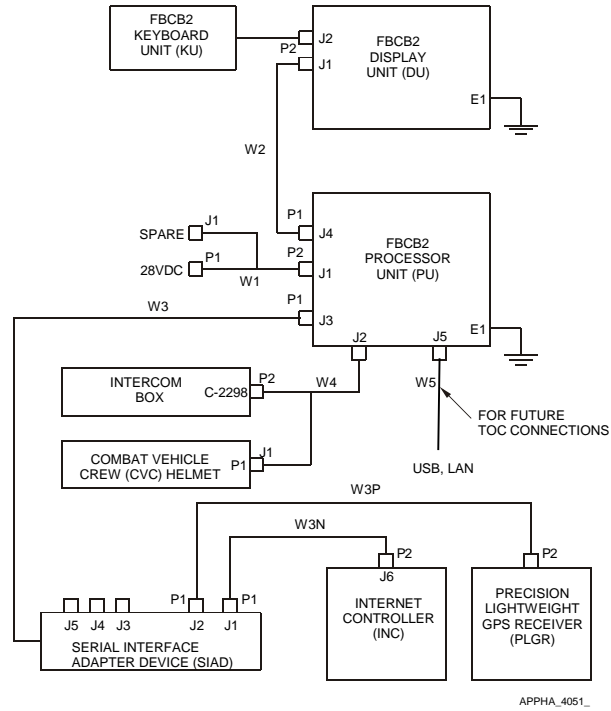

APPHA_4051_

Figure 5–2. AN/UYK-128(V) Computer Interconnect Diagram

5-6

5-6 DTD/MDL CABLE CONNECTIONS

The Data Transfer Device (DTD)/Mission Data Loader (MDL) unit may be connected to the AN/UYK-128(V) Processor Unit or to the Display Unit. Figure 5–3 and Figure 5–4 illustrate the two DTD/MDL cable connection configurations for the AN/UYK-128)V) Computer. Figure 5–5 illustrates the DTD/MDL cable connection to the TOUGHBOOK Computer.
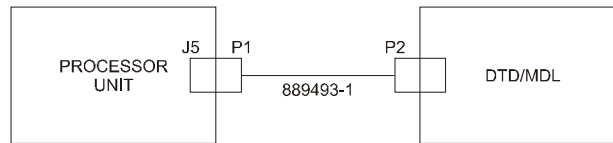

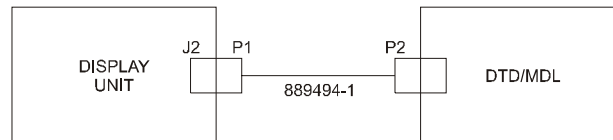**Figure 5–3. DTD/MDL to AN/UYK-128(V) PU Connection**

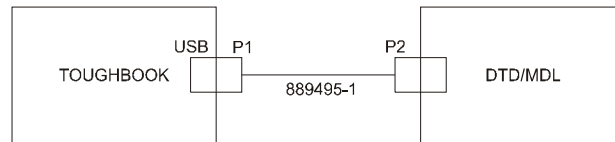**Figure 5–4. DTD/MDL to AN/UYK-128(V) DU Connection**

5-7

Figure 5–5. DTD/MDL to TOUGHBOOK Connection

6   OPERATOR TROUBLESHOOTING

Operator troubleshooting for AN/UYK-128(V) computer system is shown in Table 6-2 through Table 6-8.   Additionally a troubleshooting index (Refer to Table 6-1) provides a listing of equipment faults and/or indications and references the appropriate table to perform the necessary troubleshooting procedures.

WARNING

Do not disconnect or connect any cables without first properly powering down the system and turning off all power. Where applicable, always disconnect the ground cable last when disassembling and always connect the ground cable first when assembling. Failure to comply can cause injury to personnel or equipment damage.

CAUTION

Do not slave (jump-start) a vehicle without first powering down the AN/UYK-128(V) computer systems in both vehicles (where applicable). Failure to comply may result in equipment damage.

NOTE

If a circuit breaker does not stay in the ON position when closed, do not attempt to close it repeatedly. This could create an overload hazardous to personnel and equipment.

Table 6-1. Troubleshooting Index

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
No power to AN/UYK-128(V) computer.	DU control and LED indicators are dark.	Press display **BLK OUT LAMP**, and press again if lights do not illuminate. If system remains dark refer to Table 6-2, No. 1 step b.
	DU red **PWR** LED is blinking.	Start Vehicle, and verify the green PWR LED is illuminated. If the green PWR LED is not illuminated, call Unit Maint.
AN/UYK-128(V) computer is operating on PU battery power.	DU red **PWR** LED is illuminated indicating PU is operating on internal battery power. **NOTE** To save your data, perform the proper shutdown.	Verify that the power cable is properly connected to **J1 PWR** on **PU**. If **PWR** LED remains illuminated red, then call Unit Maint.

Table 6-1. Troubleshooting Index (Cont.)

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
AN/UYK-128(V) computer fails to switch to back up power with loss of vehicle power.	DU red **PWR** LED is not illuminated indicating PU is not operating on internal battery power.	Refer to Table 6-2, No. 3.
DU of AN/UYK-128(V) computer indicates loss of both Date/Time Group (DTG) and platform location.	The GPS status gumball is coded as R (i.e., red). **NOTE** Ensure nothing is directly blocking PLGR antenna.	Refer to Table 6-3.
Message data not transmitted or received.	Comm Status gumball is A (i.e., amber) or R (i.e., red) and/or Icons are stale). **NOTE** Ensure system has had enough time to enter the network.	Refer to Table 6-4, No.1.

Table 6-1. Troubleshooting Index (Cont.)

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
SINCGARS radio problems.	SINCGARS radio status is **No Go,** not receiving SA data, or not receiving C2 messages. **NOTE** Applies only to those platforms equipped with the SINCGARS ASIP radio.	Refer to Table 6-4, No.2.
EPLRS radio problems.	**NOTE** Applies only to those platforms equipped with the EPLRS radio. EPLRS status is **No Go** (LCNs indicate No Go or Not Tested)**,** not receiving SA data, or not receiving C2 messages.	**NOTE** Ensure that the EPLRS radio has had enough time to enter the radio network. Refer to Table 6-4, No. 3.

Table 6-1. Troubleshooting Index (Cont.)

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
CPU LED indicators on DU.	**CPU** amber LED is illuminated. **NOTE** Indicates PU degraded speed due to elevated temperature, but the PU is operating.	PU ambient temperature is increasing. Verify that PU cooling fins are clean and not blocked or obstructed in any way. **NOTE** PU NSN 7021-01-475-0217/ NSN 7021-01-487-0579 does not have cooling fins, but surfaces must remain clear to radiate heat.
	CPU red LED is illuminated. **NOTE** Indicates shut-down or failure of the PU due to elevated temperature.	Shutdown the AN/UYK-128(V) computer system immediately. Allow 20 minutes for cooling. Restart AN/UYK-128(V) computer. If red **CPU** LED again illuminates, call Unit Maint.

Table 6-1. Troubleshooting Index (Cont.)

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
DISP LED indicators on DU.	**DISP** amber LED is illuminated. **NOTE** DU's NSN 7025-01-475-0282 and NSN 7025-01-475-0229 do not have cooling fins, but surfaces must remain clear to radiate heat.	DU ambient temperature is increasing. Verify DU cooling fins are clean and not blocked or obstructed in any way.
	DISP red LED is illuminated. **NOTE** DU's NSN 7025-01-475-0282 and NSN 7025-01-475-0229 do not have cooling fins, but surfaces must remain clear to radiate heat.	Shutdown the AN/UYK-128(V) computer system immediately. Allow 20 minutes for cooling. Restart AN/UYK-128(V) computer. If red **DISP** LED again illuminates, call Unit Maint.

Table 6-1. Troubleshooting Index (Cont.)

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
Display Unit LEDs and/or screen not illuminated.	LEDs dark and/or screen is black.	Press **BLK OUT LAMP** button to verify that the screen is not in blackout mode. If not, refer to Table 6-7, No. 2.
	Display Unit screen is dark but LEDs are illuminated.	Touch the DU screen to verify that it is not in screen saver mode. If not, call Unit Maint.
Display Unit touchscreen.	Display Unit touchscreen not responding to touch or responds improperly.	Perform touchscreen calibration. If problem not solved, call Unit Maint.
KU keys and/or mouse incorrect operation.	KU keys nor the mouse operate correctly.	Check cable connection from KU to DU, and hand tighten if necessary. Reboot AN/UYK-128(V) computer. If problem still exists, call Unit Maint.

Table 6-1. Troubleshooting Index (Cont.)

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
KU keys and/or mouse incorrect operation. (Cont.)	Single keys(s) do not operate.	Select any text screen and try several keys, and call Unit Maintenance if keys do not operate.
	Missing or damaged keys.	Call Unit Maintenance.
The AN/UYK-128(V) computer system fails to boot-up.	DU screen displays the following message: **INIT: Command is respawning too rapidly. Check for possible errors.**	Verify Keyboard Unit is connected.
	Computer fails to boot-up to Session Manager screen.	Reboot the system. If computer does not boot to Session Manager screen, call Unit Maint.

Table 6-1. Troubleshooting Index (Cont.)

EQUIPMENT AND/OR FUNCTION	FAULT INDICATION	CORRECTIVE ACTION
The AN/UYK-128(V) computer system fails to boot-up. (Cont.)	Computer continuously reboots/locks up, indicating a possible PU fault.	Reboot computer according to established orderly procedures, but if unsuccessful refer to Table 6-6.
Internet Controller (INC).	Router file (F5 Status) indicates **PPP No Go**.	Perform the clear INC procedure according to Table 6-8. **NOTE** It may be necessary to repeat the procedure three or four times to clear the INC. Problem solved. If not, call Unit Maint.

Table 6-2. Power Troubleshooting

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
1	No power to AN/UYK-128(V) computer (Display Unit LEDs are dark.)	a. Press Display Unit **BLK OUT LAMP**, press again if lights do not illuminate.	a.1 System lights up - problem solved. a.2 System remains dark continue next step.
		b. Press Display Unit **FCN** and **LED+** buttons several times.	b.1 LEDs light up - problem solved. b.2 LEDs remains dark - continue next step.
		c. Press Display Unit **PWR** ON button for up to 4 seconds until **PWR** LED illuminates.	c.1 System lights up - problem solved. c.2 System remains dark - continue next step.
		d. Verify W1 and W2 cables are properly secured.	d. Continue next step.
		e. Reset Processor Unit circuit breaker/ switch.	e. Continue next step.

Table 6-2. Power Troubleshooting (Cont.)

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
1 (Cont.)	No power to AN/UYK-128(V) Computer (Display Unit **PWR** LEDs are dark.) (Cont.)	f. Press the Display Unit **PWR** button for up to 4 seconds until **PWR** LED illuminates.	f.1 If green **PWR** LED lights up - problem solved. f.2 System remains dark - continue next step.
		g. Check for specific platform(s) as follows: (If your vehicle is not listed, proceed to step h.)	
		g.1 M1068/ M113/M934/ M1097. Check SINCGARS ASIP for power.	g.1 Retry pressing Display Unit **PWR** button for 4 seconds. If the **PWR** green LED lights up, problem solved. If not, proceed to step h.
		g.2 Tracked Vehicles. Verify MCS System switch is set to one of the three program settings.	g.2 Retry pressing Display Unit **PWR** button for four seconds. If **PWR** green LED lights up, problem solved. If not, proceed to step h.

Table 6-2. Power Troubleshooting (Cont.)

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
1 (Cont.)	No power to AN/UYK-128(V) Computer (Display Unit **PWR** LEDs are dark.) (Cont.)	g.3 Paladin verify Master Power switch is set to ON. h. Start vehicle. Repeat No. 1 steps a through g above.	g.3 Retry pressing Display Unit **PWR** button for four seconds. If **PWR** green LED lights up, problem solved. If not, proceed to step h below. h. If **PWR** green LED lights up, problem solved. If not, call Unit Maint.
2	AN/UYK-128(V) computer is operating on PU battery backup power. **NOTE** When the DU **PWR** red LED is illuminated, the PU is operating on internal battery. Perform proper shutdown to save data.	a. Is power cable connected to J1 on Processor Unit? b. Verify vehicle does not have a power problem.	a.1 Yes – continue with next step. a.2 No – call Unit Maintenance. b.1 Vehicle power shows amber. Start vehicle – problem solved. If not, continue. b.2 SINCGARS ASIP radio has power – call Unit Maint. If not, continue.

Table 6-2. Power Troubleshooting (Cont.)

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
2 (Cont.)	AN/UYK-128(V) computer is operating on PU battery backup power. (Cont.)	c. Set SINCGARS/VAA Power CB1 switch to ON and RT function switch to STBY or ON. d. Verify that vehicle switches/circuit breakers are set to ON.	c.1 SINCGARS ASIP RT display lights – call Unit Maint. c.2 SINCGARS ASIP radio system has no power – continue with next step. d.1 Vehicle switches/circuit breakers are set off - set them on – repeat step 2c above. d.2 Vehicle switches/circuit breakers are set to ON – call vehicle maintenance.
3	AN/UYK-128 (V) computer fails to switch to backup power with loss of power.	Open PU access panel and verify battery status.	**NOTE** Power up system for two hours to charge batteries. Verify Battery Tray/ Battery Box batteries are charging. If not, call Unit Maint.
4	DU PWR red LED is blinking.		Start Vehicle – Problem solved. If not, call Unit Maint.

Table 6-3. Loss of Time/Location Troubleshooting

SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
The Display Unit indicates loss of Date/Time Group (DTG) and/or platform location (GPS status indicator red).	a. Select **F5 Status** button on Ops screen. b. PLGR indicates correct DTG and location.	a. Check **Time**, **Position**, and **Heading** status. If any one of the three is **Go**, proceed to step c. If all are **No Go**, proceed to step b. b.1 Shutdown AN/UYK-128(V) computer and set circuit breaker/switch to OFF. b.2 Shutdown PLGR. b.3 Check W3P serial interface connection to PLGR J2. If loose, hand tighten cable. b.4 Check remote PLGR antenna cable connections. b.5 Startup PLGR. b.6 Set circuit breaker/switch to ON and startup AN/UYK-128(V) computer. b.7 After startup, AN/UYK-128(V) computer indicates time/location – problem solved. b.8 After startup, AN/UYK-128(V) computer does not indicate time/location – call Unit Maintenance.

Table 6-3. Loss of Time/Location Troubleshooting (Cont.)

SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
The Display Unit indicates loss of Date/Time Group (DTG) and/or platform location (GPS status indicator red). (Cont.)	c. PLGR does not indicate correct DTG and/or location.	c.1 Verify PLGR is properly setup and COMSEC is loaded. If not, refer to PLGR TM. If properly setup, cont.
		c.2 Shutdown AN/UYK-128(V) computer and set circuit breaker/switch to OFF.
		c.3 Shutdown PLGR.
		c.4 Disconnect power cable, antenna cable, and serial data cable from PLGR.
WARNING PLGR battery may leak or explode if left inside PLGR while PLGR is connected to external power. Ensure PLGR battery is removed from PLGR prior to connecting PLGR to external power. Failure to comply may result in injury to personnel or damage to equipment.		c.5 Remove PLGR from mount and install battery.
		c.6 Position PLGR outside of platform.
		c.7 If PLGR indicates correct DTG and location, then platform antenna or antenna cable possible fault - call Unit Maintenance.
		c.8 If PLGR does not indicate correct DTG and location, then PLGR fault-call Unit Maintenance.
		c.9 Remove battery from inside of PLGR and reinstall PLGR back in mount (see Warning).

6-15

Table 6-4. Loss of Connectivity Troubleshooting

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
1	Message data not transmitted or received (Comm Status is "A" (amber) or "R" (red) and/or Icons are stale). **NOTE** Ensure the system has had enough time to enter the network.	a. Select **Status** (**F5**) button on Ops screen. **NOTE** Following check is for the INC. b. Router file indicates PPP status of **No Go**.	a. Open **Local Comm** folder and check router status. If router status shows **No Go**, open Router folder. Proceed to step b if PPP is **No Go**. Proceed to No. 2 if SINCGARS status is **Degraded/No Go**. Proceed to No. 3 if EPLRS status is **No Go**. b.1 Open Router file and verify PPP status. If PPP status is **No Go**, proceed to b.2. If PPP status is **Go**, proceed to No. 2. b.2 Verify W3 is properly connected to J6 connector on the INC. If properly connected, continue with b.3. If not, shutdown INC and AN/UYK-128(V) computer. Reboot INC and AN/UYK-128(V) computer. Wait 2 to 3 minutes - problem solved. If not, continue with b.3.

Table 6-4. Loss of Connectivity Troubleshooting (Cont.)

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
1 (Cont.)	Message data not transmitted or received (Comm Status is "A" (amber) or "R" (red) and/or Icons are stale). (Cont.)		b.3 Perform procedure to clear INC (refer to Table 6-8). Problem solved. If not, call unit maintenance.
2	SINCGARS status No Go or not receiving SA or C2. **NOTE** Ensure the system has had enough time to enter the network	**NOTE** The following check is for platforms equipped with SINCGARS ASIP radio. a. Expand SINCGARS file to show Interface, Net ID/Frequency and Packet mode status.	a. Proceed to step b for Interface **No Go** status, step c for Net ID/Frequency **No Go** status and step d for Packet mode **No Go** status. If all indicate **Go**, proceed to step f.

Table 6-4. Loss of Connectivity Troubleshooting (Cont.)

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
2 (Cont.)	SINCGARS status **No Go** or not receiving SA or C2. (Cont.)	b. SINCGARS file Interface status is **No Go**.	b.1 Check the SINCGARS ASIP is in channel one. Check W4 to ensure that cable is properly connected to the corresponding connector (i.e., radio A to Data A connector on INC). If not, correct and verify status – problem solved. b.2 If connections are correct, call unit maintenance.
		c. SINCGARS file Net ID/Frequency status is **No Go**.	c.1 Check Julian date/time and frequency settings of R/T radio. If incorrect, set correct date/time and frequency and verify status – problem solved. c.2 If Julian date/time and frequency correct, call unit maintenance.

Table 6-4. Loss of Connectivity Troubleshooting (Cont.)

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
2 (Cont.)	SINCGARS status **No Go** or not receiving SA or C2. (Cont.)	d. SINCGARS Packet file status is **No Go**.	d.1 Check SINCGARS ASIP setup (e.g., chan 1, Cipher Text (**CT**), frequency hop, Packet Mode (**PCKT**), frequency). If not properly setup, apply correct settings and verify status– problem solved.
			d.2 R/T radio setup properly, proceed.
		e. Check COMSEC load.	e.1 If a fill is needed, load COMSEC per SINCGARS TM.
			e.2 If COMSEC is good, proceed to step f.
		f. Check radio(s) antenna(s) for damage and placement. (Antennas should not be stowed, or tied down.)	f.1 Untie antenna(s) and recheck system for data transmit/ receive capability. If OK, problem solved.
			f.2 Antenna(s) damaged or up and in good condition. - Call Unit Maintenance and report conditions.

Table 6-4. Loss of Connectivity Troubleshooting (Cont.)

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
3	EPLRS status **No Go** or not receiving SA or C2. **NOTE** Ensure the system has had enough time to enter the network.	**NOTE** Following check is for platforms equipped with EPLRS. EPLRS status LCNs indicate **No Go** or **Not Tested**.	a. EPLRS **OUT OF NET** light blinks once every second (cannot find network), check the following: 1) Ensure antenna is connected. 2) Check to make sure COMSEC IS Keyed (Perform test with URO to ensure that an @C or @S is returned). If not, call Unit Maint. b. EPLRS **OUT OF NET** light blinks once every four seconds (unit caught in a track net), recycle EPLRS power. Problem solved. If not, call unit maintenance. c. Use the URO to verify status of EPLRS. If unable to fix, call unit maintenance.

Table 6-5. Keyboard Unit (KU) Troubleshooting

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
1	Single key(s) on Keyboard Unit does not operate.	Select any text screen and try several keys.	Call Unit Maintenance and report which key(s) do not operate.
2	None of the Keyboard Unit keys or the mouse operates correctly.	a. Check cable connection from Keyboard Unit to Display Unit. b. Perform AN/UYK-128(V) shutdown. Press DU **PWR** button for up to 4 seconds (or until **PWR** green LED is illuminated) and then release to reboot.	a. Hand tighten connection If loose, proceed to step b. b.1 Keyboard Unit keys and mouse now function correctly - problem solved. b.2 Keyboard Unit keys and mouse still do not function correctly - call Unit Maintenance.
3		Keyboard Unit has missing or damaged keys.	Call unit maintenance.

NOTE

AN/UYK-128(V) computer will not boot up if the Keyboard Unit is disconnected.

NOTE

When the disk drive is near its capacity, a highlighted exclamation point will be displayed on the "F5 Status…" button and the "General" tab.

Table 6-6. Processor Unit (PU) Rebooting Troubleshooting

SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
The Processor Unit of AN/UYK-128(V) computer continuously reboots/ locks, indicating a possible Processor Unit fault.	Operator followed established orderly procedures for rebooting the computer. The system fails to reboot.	a. Press Display Unit **PWR** button for up to 4 seconds until green LED goes dark to shut down AN/UYK-128(V). b. Wait 20 seconds. Press Display Unit **PWR** button for up to 4 seconds (or until green LED is lit), then release to restart AN/UYK-128(V). c. At the Session Manager screen, Clear Logs and Queues per the procedures listed in Table 2-7. d. If AN/UYK-128(V) functions correctly, the problem is solved. e. If AN/UYK-128(V) still does not function properly, call Unit Maint.

Table 6-7. Display Unit (DU) Troubleshooting

NO.	SYMPTOM	TEST OR INSPECTION	CORRECTIVE ACTION
1	Display Unit **DISP** amber or red LED illuminated (**PWR** LED is green).	Verify Display Unit is not in direct sunlight.	Refer to AN/UYK-128(V) computer Operator's TM for troubleshooting.
2	Display Unit LEDs and/or screen not illuminated (LEDs dark and/or screen is black).	Press **BLK OUT LAMP** button to verify that it is not in blackout mode.	a. Display Unit LEDs and screen illuminate – problem solved. If not, continue. b. Press Display Unit **BRT +** button and **FCN** plus **LED +** button(s) (4 times) each to make sure brightness is not turned down – problem solved. If not, continue.
3	Display Unit screen is dark (LEDs illuminated).	Touch the Display Unit screen to verify it is not in screen saver mode.	Screen illuminates - problem solved. If not, call unit maintenance.
4	Display Unit touchscreen is not functioning.	Perform touchscreen calibration.	Touchscreen functions properly – problem solved. If not, call Unit Maint.

Table 6-8. Clear INC (SINCGARS ASIP Radio)

NO.	OPERATOR ACTION	INDICATION OR CONDITION
1	Rotate SINCGARS ASIP R/T radio **FCTN** switch to **LD** position.	R/T on SINCGARS ASIP radio has **FCTN** switch position set to **LD**.
2	Press the **2** button.	Radio displays: **RT**
3	Press the **7** button until radio display **LDE**.	Radio displays: **LDE** Then **LDE-N** **NOTE** If R/T displays **NEWIP**, after **LDE-N**, press **STO** button.
4	Press the **1** button.	Radio displays: **1**
5	Press the **STO** button.	Radio displays: **DEFLT** Then **RT**
6	Rotate radio function switch from **LD** position to **ON** position.	R/T on SINCGARS ASIP radio has **FCTN** switch position set to **ON** position.
7	Reinitialize AN/UYK-128(V) computer.	Communication status goes green, problem solved. If Communication status is red or amber, call Unit Maintenance.